

REMARKS

The Office Action mailed 1 April 2009, has been received and its contents carefully noted. The pending claims, claims 1, 2, 4-6, 8-11, 13-22 and 24, were rejected. By this Response, claims 1, 2, 4-6, 8, 13-16 and 24, were amended. The amendments to claims 4-6, 8, 13-16 and 24 were made to improve their readability and are not intended to change the scope and meaning of the claims. Support may be found in the specification and the claims as originally filed. See, for example, tables 3 and 4 as set forth in the specification. No statutory new matter has been added. Therefore, reconsideration and entry of the claims as amended are respectfully requested.

The Claimed Invention

Applicants respectfully submit that claims 1 and 2, as amended, recite 62 at. % as the lower range of the gallium content with respect to all metallic atoms in the transparent oxide thin film. Therefore, according to the claimed invention, the transparent oxide thin film has 62 at. % to 100 at. % gallium content.

Claim 1 is also amended such that the transmittance of light in the transparent film at wavelengths of 380 nm, 320 nm and 300 nm is 88.5 % or more, 58.4% or more, and 37.4% or more, respectively. Similarly, claim 2 is amended such that the transmittance of light in the transparent film at wavelengths of 380 nm, 320 nm and 300 nm is 92.3 % or more, 62.3 % or more, and 41.1 % or more, respectively.

Rejection under 35 U.S.C. 112, second paragraph

The Examiner rejected claims 16-18 under 35 U.S.C. 112, second paragraph, as being indefinite. Specifically, the Examiner deemed that the phrase “into which a gas barrier film is inserted” is unclear as to what manner the gas barrier film interacts with the resin plate.

Applicants have amended claim 16 as proposed by the Examiner to recite “resin plates or resin films between which the gas barrier film exists”. Thus, Applicants respectfully submit that claim 16, as amended, is clear and definite.

Therefore, the rejection under 35 U.S.C. 112, second paragraph, should be withdrawn.

Claim Rejections – 35 U.S.C. 103(a)

The Examiner rejected claims 1, 2, 4, 5, 8-11, 13-15, 19-22 and 24 under 35 U.S.C. 103(a) as being unpatentable over Toppan (JP 2000-106034) in view of Minami (JP 09-259640). The Examiner rejected claim 6 as being unpatentable over Toppan and Minami and further in view of Asahi (JP 09-291356). The Examiner also rejected claims 16-18 as being unpatentable over Toppan and Minami and further in view of Nippon (JP 2004-127719) and Fujikake (US 20060152136).

Applicants respectfully submit that the cited documents, alone or in combination, do not teach or suggest the claimed invention. Specifically, as set forth in claims 1 and 2, the transparent oxide thin film has a gallium content of 62 at. % to 100 at. % with respect to all metallic atoms. Toppan and Minami do not teach or suggest oxide films having a gallium content of 62 at. % to 100 at. % with respect to all metallic atoms.

As noted by the Examiner, Toppan does not disclose the specific ratio of gallium in the overall oxide layer and Minami discloses a transparent conductive film having a gallium content of 15-49 at. %. Minami does not teach or suggest any other gallium content. Consequently, the combination of Toppan and Minami will, at most, result in a thin film having a gallium content of 15-49 at. % which falls outside of the range set forth in the instant claims. Further, Applicants respectfully submit that the cited documents, alone or in combination, do not teach or suggest the light transmittance of the films with respect to given wavelengths as set forth in claims 1 and 2. Thus, the combination of Toppan and Minami does not teach or suggest the present invention as a whole.

In addition, Applicants respectfully submit that Minami teaches away from the present invention. In particular, Minami teaches that when the gallium content is not more than 49 at. %, a pseudo-binary system of Ga_2O_3 - In_2O_3 is formed. See [0004] of English Translation. In other words, Minami teaches away from a gallium content of 49.1% or more because the film will include GaInO_3 and the desirable properties of the Ga_2O_3 - In_2O_3 binary system will be diminished. Thus, Minami teaches away from a transparent oxide thin film having a gallium content of 62 at. % to 100 at. % according to the claimed invention.

Applicants respectfully submit that Asahi, Nippon and Fujikake do not alleviate the deficiencies of Toppan and Minami. Nowhere do Asahi, Nippon and Fujikake, alone or in

combination, teach or suggest a transparent oxide thin film having a gallium content of 62 at. % to 100 at. % or the light transmittance with respect to a given wavelength according to the claimed invention.

Since the cited documents, alone or in combination, do not result in the claimed invention as a whole and Minami teaches away from the gallium content set forth in the claims, the claimed invention is novel and unobvious. Therefore, the rejections under 35 U.S.C. 103(a) should be withdrawn.

Request for Interview

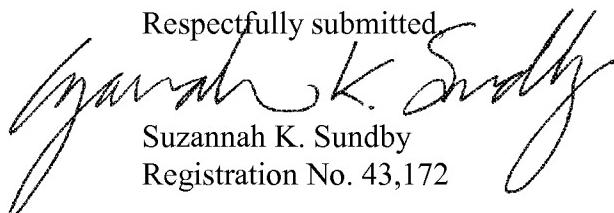
Either a telephonic or an in-person interview is respectfully requested should there be any remaining issues.

CONCLUSION

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Therefore, it is respectfully requested that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Official action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

It is not believed that extensions of time are required, beyond those that may otherwise be provided for in accompanying documents. However, in the event that additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. 1.136(a), and any fees required therefor are hereby authorized to be charged to **Deposit Account No. 024300**, Attorney Docket No. **034145.004**.

Respectfully submitted



Suzannah K. Sundby
Registration No. 43,172

Date: 31 July 2009
SMITH, GAMBRELL & RUSSELL, LLP
1130 Connecticut Ave., NW, #1130
Washington, D.C. 20036
Telephone: (202) 263-4332
Fax: (202) 263-4352
ssundby@sgrlaw.com